

Amendments to the Claims:

Please cancel claims 1-14 and 23; please amend claims 15, 19, and 22; and claims 16 and 17 are withdrawn from consideration, as follows. This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

15. (Currently Amended) A method for treating a blood vessel having a vessel wall, the method comprising:

introducing a catheter into the blood vessel;

expanding a balloon of the catheter near a target site to engage the vessel wall

surrounding a circumference of the balloon;

expanding fluid at a first location within the balloon; and

expanding fluid at a second location within the balloon to cryogenically evenly cool ~~at least a portion of~~ the engaged vessel wall, the second location being circumferentially separated from the first location.

16. (Withdrawn) The method of claim 15, further comprising moving a diffuser head between the first location and the second location.

17. (Withdrawn) The method of claim 16, wherein a housing separates the balloon and the vessel wall when the orifice head is at the first location, wherein fluid expansion is initiated at the first location, and wherein the moving step moves ports of the diffuser head from within the housing after a reduction in thermal transients of the gas expansion.

18. (Original) The method of claim 15, wherein fluid expansion occurs simultaneously at the first and second locations, the balloon being axially elongate, the first and second locations being separated axially.

19. (Currently Amended) The method of claim 15, wherein the fluid expansion occurs simultaneously at the first and second locations so that the fluid flows radially toward the vessel wall, ~~the first and second locations being separated circumferentially.~~

20. (Original) The method of claim 15, wherein the first and second expansion steps comprise vaporization of at least a portion of the fluid from a liquid to a gas so that the enthalpy of vaporization cools the at least a portion of the engaged vessel wall.

21. (Original) The method of claim 15, wherein the first and second expansion steps are effected by passing the fluid through at least one Joule-Thompson orifice.

22. (Currently Amended) A method for treating a blood vessel having a vessel wall, the method comprising:

introducing a catheter into the blood vessel;

expanding a balloon of the catheter near a target site within the vessel wall, the balloon having a balloon wall;

cooling the vessel wall with the balloon by coating at least a portion of an inner surface of the balloon wall with a liquid so that the liquid coating vaporizes while the coating engages the balloon wall within the balloon.

23. (Canceled)